

Appendix A: Description of SCE MPR Model

In an effort to simplify the cashflow model, the model subgroup agreed to divide the costs (operating and capital) into six categories. The Subgroup then discussed the major cost components to be considered as part of the capital, fixed and variable cost categories. The goal of this task was to provide a common framework for parties to compare costs to prevent both double- and non-counting of certain costs. The lists

below include all cost components raised. The parties did not agree as to the validity of including the costs of certain cost elements (e.g., capital additions). (Source: SCE MPR Model, "Definition of Variables Excel Spreadsheet Tab").

Categories of Costs

- **Plant (Capital) Costs**
- **Fixed Costs**
- **Variable Costs**
- Property Taxes
- Insurance
- Natural Gas Fuel

Fixed Costs (\$/kW-year) are shown on the next page.

Plant (Capital) Costs (\$)

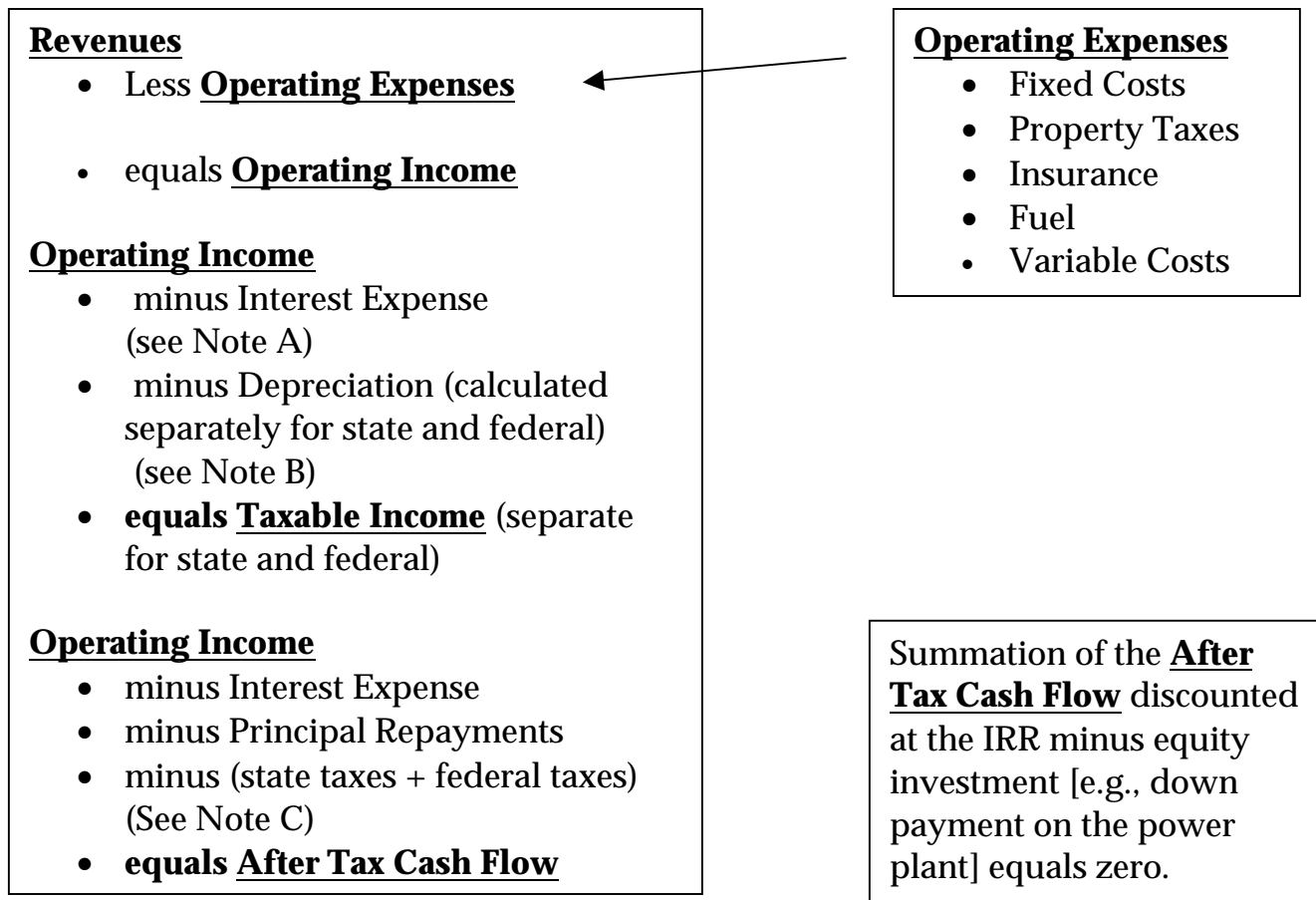
- Turbines
- Balance of Plant (BOP)
- Transmission/ Gas/ Water Interconnection Costs
- Land
- Permitting/Siting
- Interest During Construction (IDC)/Financing Cost
- Environmental Reduction Credits (ERC)
- Initial Working Capital (IWC)
- Initial Spare Parts
- Local benefit and mitigation costs
- Insurance during construction

Variable Costs (\$/kWh)

- Major Maintenance
- Water/Consumables/Chemicals

<p><u>Fixed Costs (\$/kW-year)</u></p> <ul style="list-style-type: none"> • Administrative and General (A&G) • Labor • Other O&M • Station Power • Transmission O&M • Capital Additions (capital improvements, not Major Maintenance listed under Variable Cost) • Negative Initial Working Capital in last year, if IWC included • On-going Spare Parts 	<p>Note that Property Taxes and Insurance are not included in fixed costs. Historical Fixed Costs data must exclude property taxes and insurance to ensure that these costs are not double counted.</p>
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The SCE MPR cashflow model solves for the revenue needed to generate the cashflow to pay for operating expenses, interest expense, principal repayments and taxes (federal and state) and to provide investors with the required internal rate of return or IRR. (Source: "Description of Model Structure Excel Spreadsheet Tab")



Input Assumption Components

- Capacity (kW)
- Total capital cost January 1 of first operational year (\$000)
- First operational year [e.g., 2005 or 2006]
- Capacity Factor (%)
- Transformer Loss Factor (%)
- GMM to load center (%)
- Insurance as % of plant cost (%)
- Property taxes as % of plant cost (%)
- Fixed O&M (\$/kW-yr) in first operational year
- Variable O&M (mills/kWh) in first operational year
- New & Clean heat rate (Btu/kWh HHV¹)
- Heat rate degradation factor (%)
- Average heat rate (Btu/kWh) HHV
- debt as % of total cost (%)
- Interest Rate on Debt (%)
- Debt Term (years)
- 20-year target return on equity (%)
- Federal Tax Rate (%)
- State Tax Rate (%)

Source: SCE MPR model, "Inputs and Summary Excel Spreadsheet Tab"

Notes on "Description of Model Structure" Spreadsheet Tab

Note A: Interest Expense
= interest rate * (beginning balance of debt minus cumulative principal payments), where beginning balance of debt = debt % * capital costs.

Note B: State and federal tax codes require two different depreciation schedules. Federal uses 20-year 150% declining balance. State uses 28-year double declining balance. This calculation uses one depreciation schedule for the entire plant. Typically, certain assets on plants have different schedules (e.g., land is not depreciable). Each individual particular power plant will have its particular adjustments.

Note C: To calculate taxes: Taxable Income (minus states taxes for federal tax calculation) multiplied by tax rate (separate for state and federal)